

CLAIMS

1. An access method for an apparatus to gain access to a memory device, comprising,
in the apparatus,
5 transmitting designation information for designating an access area of the memory device; and
transmitting together a processing command for the access area and verification information on the designation information, and
10 in the memory device,
receiving the designation information;
further receiving the processing command and the verification information, and verifying the designation information using the verification information; and
15 executing the processing command when verification succeeds.
2. An access method for an apparatus to gain access to a memory device, comprising:
in the apparatus,
20 sharing with the memory device enabled area information on an access enabled area of the memory device;
referring to the enabled area information, and transmitting designation information for designating an access area of the memory device; and
25 transmitting together a processing command for the access area and verification information on the designation information, and

in the memory device,
receiving the designation information;
further receiving the processing command and the
verification information, and verifying the designation
5 information using the verification information; and
executing the processing command when verification
succeeds.

3. An access method for an apparatus to gain access
to a memory device, comprising:

10 in the apparatus,
sharing a verification key with the memory device;
transmitting designation information for
designating an access area of the memory device; and
transmitting together a processing command for the
15 access area and verification data obtained by encrypting
verification information on the designation information
using the verification key, and

in the memory device,
receiving the designation information;
20 further receiving the processing command and the
verification data, and verifying the designation
information using the verification data and the
verification key; and

executing the processing command when verification
25 succeeds.

4. An access method for an apparatus to gain access
to a memory device, comprising:

in the apparatus,

sharing with the memory device enabled area
information on an access enabled area of the memory device;

further sharing with the memory device a
5 verification key corresponding to the access enabled
area;

referring to the enabled area information, and
transmitting designation information for designating an
access area of the memory device; and

10 transmitting together a processing command for the
access area and verification data obtained by encrypting
verification information on the designation information
using the verification key, and

in the memory device,

15 receiving the designation information;

further receiving the processing command and the
verification data;

verifying the designation information using the
verification data and the verification key; and

20 executing the processing command when verification
succeeds.

5. An access method for an apparatus to gain access
to a memory device, comprising:

in the apparatus,

25 sharing with the memory device enabled area
information on an access enabled area of the memory device
using first protocol commands;

referring to the enabled area information, and transmitting designation information for designating an access area of the memory device using a second protocol command; and

5 transmitting together a processing command for the access area and verification information on the designation information using the second protocol command, and

in the memory device,

10 receiving the designation information;

further receiving the processing command and the verification information, and verifying the designation information using the verification information; and

15 executing the processing command when verification succeeds.

6. An access method for an apparatus to gain access to a memory device, comprising:

in the apparatus,

20 sharing a verification key with the memory device using first protocol commands;

transmitting designation information for designating an access area of the memory device using a second protocol command; and

25 transmitting together, using the second protocol command, a processing command for the access area and verification data obtained by encrypting verification

information on the designation information using the verification key, and

in the memory device,

receiving the designation information:

5 further receiving the processing command and the verification data, and verifying the designation information using the verification data and the verification key; and

executing the processing command when verification
10 succeeds.

7. An access method for an apparatus to gain access to a memory device, wherein the memory device has:

a first area with tamper resistance restricting access from the apparatus;

15 a second area with non-tamper resistance restricting access from the apparatus;

a third area enabling access from the apparatus;
and

a function of distinguishing between first protocol
20 commands that are processing commands at least for the first area and second protocol commands that are processing commands at least for the third area, and the method comprises:

in the apparatus,

25 sharing with the memory device enabled area information on an access enabled area of the memory device using the first protocol commands;

referring to the enabled area information, and transmitting designation information for designating an access area of the second area using the second protocol command; and

5 transmitting together a processing command for the access area and verification information on the designation information using the second protocol command, and

in the memory device,

10 receiving the designation information;

further receiving the processing command and the verification information, and verifying the designation information using the verification information; and

15 executing the processing command when verification succeeds.

8. An access method for an apparatus to gain access to a memory device, wherein the memory device has:

a first area with tamper resistance restricting access from the apparatus;

20 a second area with non-tamper resistance restricting access from the apparatus;

a third area enabling access from the apparatus; and

25 a function of distinguishing between first protocol commands that are processing commands at least for the first area and second protocol commands that are processing commands at least for the third area, and the

method comprises:

in the apparatus,

sharing a verification key with the memory device
using the first protocol commands;

5 transmitting designation information for
designating an access area of the second area using the
second protocol command; and

transmitting together, using the second protocol
command, a processing command for the access area and
10 verification data obtained by encrypting verification
information on the designation information using the
verification key, and

in the memory device,

receiving the designation information;

15 further receiving the processing command and the
verification data, and verifying the designation
information using the verification data and the
verification key; and

executing the processing command when verification
20 succeeds.

9. A memory device read and written by an apparatus,
comprising:

a processing command receiver that receives
designation information for designating an area to access,
25 while receiving together verification information based
on the designation information and a command for read
or write;

a designation information verifier that performs verification processing on the designation information using the verification information;

a storage area that stores data;

5 a storage area access section that performs read or write from/in a designated area of the storage area corresponding to the command for processing, when the verification processing succeeds;

a data transmitter that transmits data read by the
10 storage area access section to the apparatus; and

a data receiver that receives data to write from the apparatus.

10. The memory device according to claim 9, wherein the designation information verifier performs the
15 verification processing using the verification information and a verification key.

11. The memory device according to claim 10, further comprising:

a verification key sharing section that shares the
20 verification key with the apparatus.

12. The memory device according to claim 9, further comprising:

an enabled area information sharing section that shares enabled area information indicative of an access
25 enabled area of the memory device with the apparatus.

13. An information apparatus that reads and writes a memory device, comprising:

an designation information determiner which determines an area to read or write, and further determines designation information for designating the area;

5 a verification information generator that performs processing for generating verification information from the designation information;

a processing command transmitter that transmits the designation information, while transmitting together the verification information and a processing command for
10 read or write;

a data transmitter that transmits data to the memory device when the processing command is of write;

a data receiver that receives data from the memory device when the processing command is of read; and

15 a data storage that stores the data to transmit to the memory device, while storing the data received from the memory device.

14. The information apparatus according to claim 13, wherein the verification information generator performs
20 the processing for generating the verification information using the designation information and a verification key.

15. The information apparatus according to claim 14, further comprising:

25 a verification key sharing section that shares the verification key with the memory device.

16. The information apparatus according to claim 13,

further comprising:

an enabled area information sharing section that shares enabled area information indicative of an access enabled area of the memory device with the memory device.

5 17. An access method for an apparatus to gain access to a memory device, comprising:

in the apparatus,

transmitting designation information for designating an access area of the memory device; and

10 transmitting together a processing command for the access area and verification data obtained by encrypting verification information on the designation information using a verification key, and

in the memory device,

15 receiving the designation information;

further receiving the processing command and the verification data, and verifying the designation information using the verification data and the verification key; and

20 executing the processing command when verification succeeds.

18. An access method for an apparatus to gain access to a memory device, comprising:

in the apparatus,

25 sharing enabled area information on an access enabled area of the memory device using a first processing series command;

further sharing a verification key corresponding to the access enabled area using the first processing series command;

transmitting designation information for
5 designating an access area of the memory device using a second processing series command; and

transmitting together, using the second processing series command, a processing command for the access area and verification data obtained by encrypting verification
10 information on the designation information using the verification key, and

in the memory device,

receiving the designation information;

further receiving the processing command and the
15 verification data, and verifying the designation information using the verification data and the verification key; and

executing the processing command when verification succeeds.

20 19. An access method for an apparatus to gain access to a memory device, wherein the memory device has:

a first area with tamper resistance restricting access from the apparatus;

a second area with a large capacity and non-tamper
25 resistance restricting access from the apparatus;

a third area with a large capacity enabling access from the apparatus; and

a function of distinguishing between first protocol commands that are processing commands at least for the first area and second protocol commands that are processing commands at least for the third area, and the
5 method comprises:

in the apparatus,

sharing with the memory device enabled area information on an access enabled area of the memory device using the first protocol commands;

10 further sharing a verification key corresponding to the access enabled area using the first protocol commands;

transmitting designation information for designating an access area of the second area using the
15 second protocol command;

transmitting together, using the second protocols command, a processing command for the access area and verification data obtained by encrypting verification information on the designation information using the
20 verification key, and

in the memory device,

receiving the designation information;

further receiving the processing command and the verification data, and verifying the designation
25 information using the verification data and the verification key; and

executing the processing command when verification

succeeds.

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